

CIVIL ENGINEER/TECHNICIAN STUDENT CO-OP PROGRAM

General Summary of Functions/Purpose of Position

In a training capacity, perform intermediate and experience level technical work related to inspection, testing, surveying, design of plans, and project administration for the Michigan Department of Transportation (MDOT). Perform intermediate and experience level work assisting engineers and technicians in traffic, soils, and data analysis.

Duties:

- Utilize MDOT specifications to inspect asphalt placement, concrete placement, and bridge work
- Conduct traffic plan review and inspection
- Measure material quantities
- Read and interpret construction plans
- Verify slope, elevation, and horizontal and vertical alignment of roadways
- Compute areas, volumes, and thicknesses to ensure contractor compliance
- Perform concrete quality control testing by means of air, slump, and temperature tests
- Perform strength tests of concrete cylinders
- Perform sieve analysis, collect material and soil samples, and report the testing result
- Use survey equipment to provide assistance and support to construction or design survey crews
- Compute and set grades, place grade stakes, and perform construction alignment and layout
- Check and verify control points as well as witness and document points for future reference
- Use survey programs to compute and develop topographical and cross sectional diagrams
- Perform design surveys, pick-up work, and check existing layouts
- Maintain survey equipment
- Utilize design programs to assist in the development of plans, specifications, and proposals for project letting
- Deliver test samples
- Analyze various technical data
- Compile documentation
- Conduct and assist in design and project file organization
- Perform other related duties as assigned